FBL-230/200L Series

Slant-Bed Lathe with Box Ways

Flexible. Accurate. Efficient.

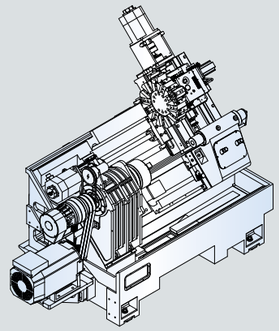
CHEVALIER®

Grinding Turning Milling

We shape your ideas.™

FBL-230 Series offers high performance and value with its slant-bed and rigid box ways

Flexible. Accurate. Efficient.



The FBL-230 Series offers a flexible, accurate and efficient solution for mixed-volume, short-run or dedicated high-volume applications. And the FBL-230MC with live tooling offers additional fast tool indexing. It's ideal for small, complex workpieces in the aerospace, automotive and medical industries.

The series is designed with a 45-degree true slant-bed rigid box ways structure. Ribbed Meehanite cast-iron mono-blocking casting provides strong support and excellent damping absorption to help resist deflection and vibration during heavy machining. The lathe is engineered with ease of access and trouble-free maintenance in mind.

Our exclusive iMachine Communications System™ (iMCS) software includes remote machine monitoring, data analysis, alarm history and maintenance updates for overall equipment effectiveness (OEE).

And to ensure the affordable FBL-230 Series lathe continues to operate efficiently for years to come, we back it with our no-nonsense standards and legendary service for reliable performance.

The FBL-230 is shown with optional accessories.

Key Features and Benefits

The FBL-230 Series multi-functional CNC lathe is engineered with high efficiency, high accuracy machining to satisfy the need for mixed-volume machining.

1— Powerful Fanuc digital spindle motor produces large torque during lower RPM and low noise operation.

2— Powerful 15 kW spindle motor handles up to 4,000 rpm with an optional 12-tool turret.*

3— Series features a rigid 45-degree true slant-bed design with a swing-over bed of 550 mm (21.7") with a maximum workpiece size of 311 mm (12.2") in diameter.

4— Decreases machining costs and increases productivity.

5— Offers iMCS for IoT readiness and 24/7 productivity.

6— Legendary Chevalier service.

The FBL-230 Series has a ribbed Meehanite cast-iron mono-blocking foundation for strong support and excellent damping absorption for heavy machining

Powerful 12-station, BMT-55 Servo Driven Turret

The series is fitted with a powerful servo indexing turret for heavy duty machining and the structured features rigid mechanical parts to meet strict requirements for machining efficiency.

- All stations are live, max. 6,000 rpm live tool speed. The fast servo index turret can reach 0.75 sec in T-T.
- Driven by a big power 3.7/5.5 kW, providing ultra-high power to meet any difficult milling task, drilling and tapping application.
- Series includes a heavy-duty Hirth coupling that features a positive form-locking, self-centering, accurate repetition connection.

*U.S.A. 12-tool turret standard.

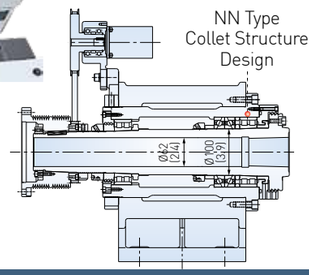
Machine Construction

High-precision spindle system

Module cartridge-type spindle design and roller bearings are used instead of a stock-type spindle structure for enhanced accuracy and service life.

10-station turret

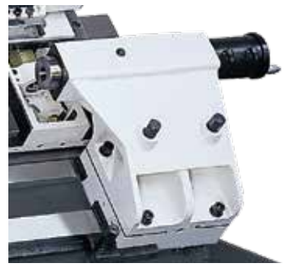
Fitted with powerful hydraulic turret for heavy-duty machining. Structure features a large curvic coupling and hydraulic clamping pressure to meet strict requirements for machining efficiency. An optional 12-station turret is available.



The Series is engineered with ease of access and trouble-free maintenance in mind

Programmable tailstock quill

Easy access manual tailstock with programmable hydraulic quill.

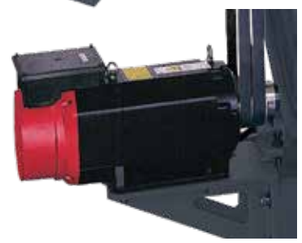


Coolant tank

Coolant tank is easily accessible and easy to maintain. Removal from front or rear of machine.

Spindle motor

Wider timing belt grabs solidly without slipping. Powerful Fanuc digital spindle motor produces large torque during lower RPM and low noise operation.



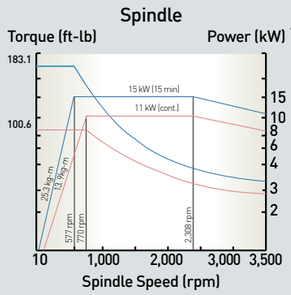
Applications

The FBL-230 Series has built-in long-term value in process-based applications

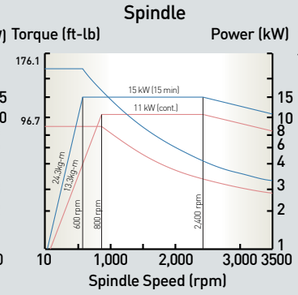
This lathe is engineered for high efficiency and high accuracy to satisfy the need for mixed-volume machining

Torque Diagram

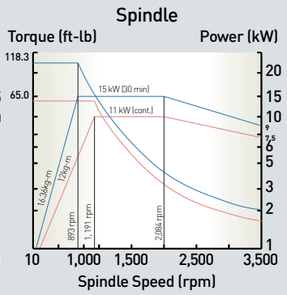
FBL-230



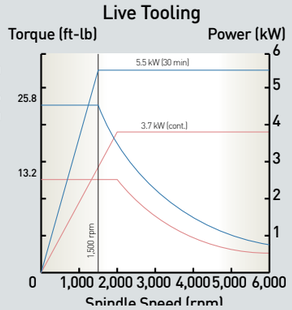
FBL-230MC



FBL-200L



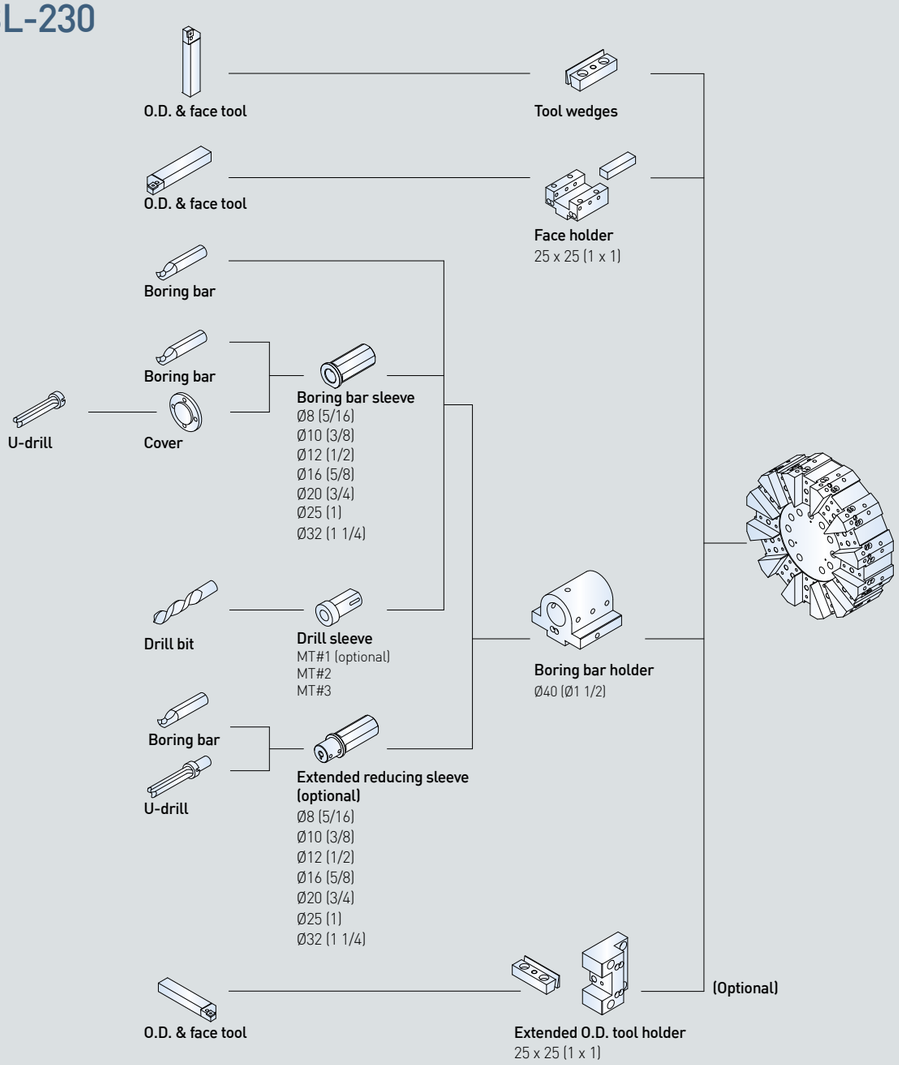
Live tooling



Tooling System Diagram

FBL-230

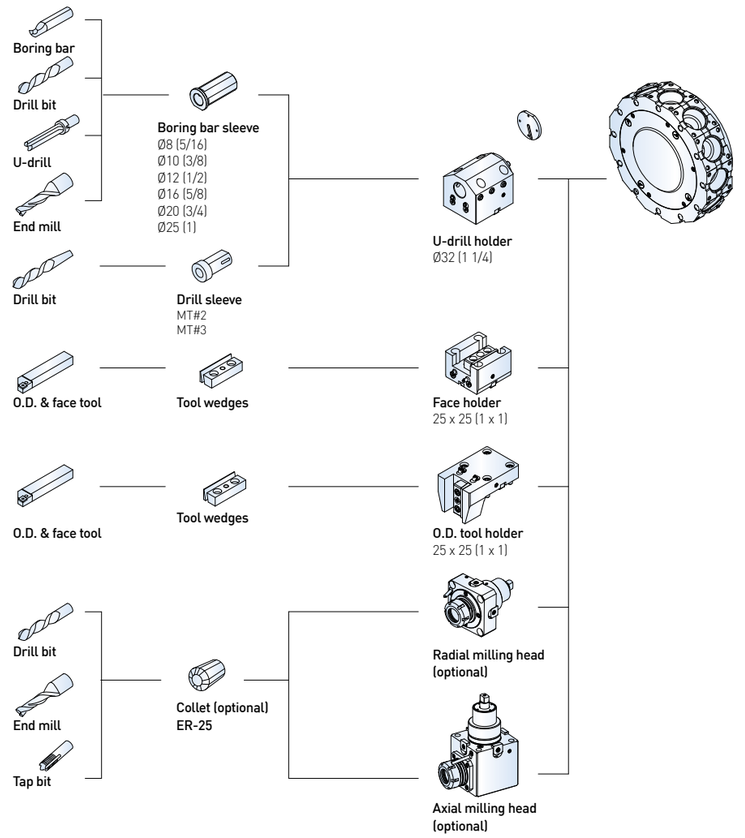
Unit: mm (")



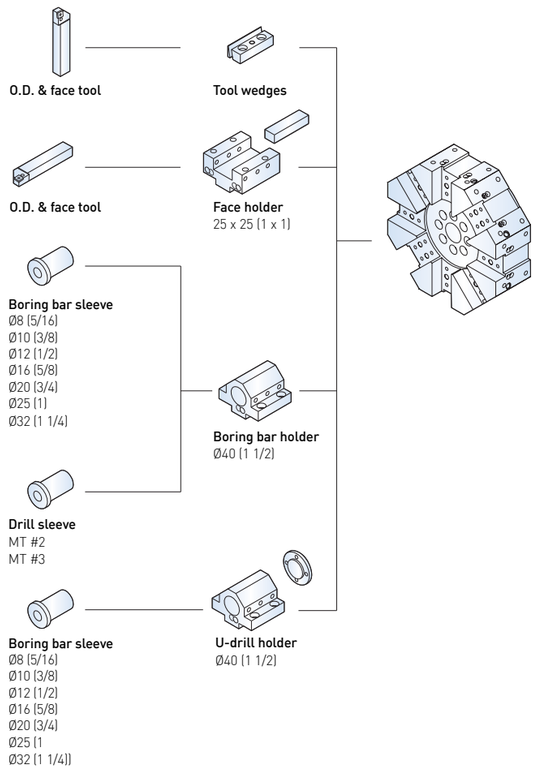
Tool System Diagram

FBL-230MC

Unit: mm (")



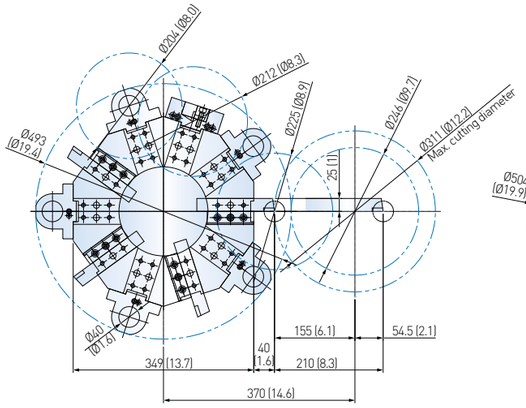
FBL-200L



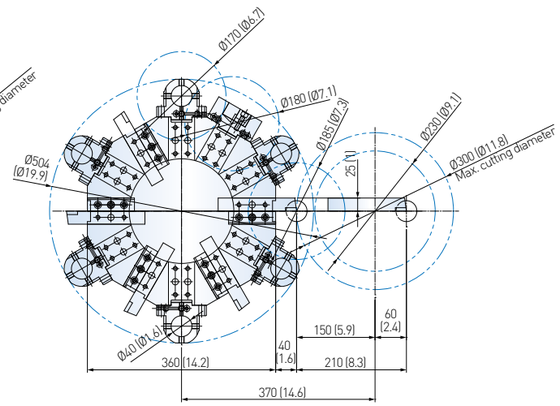
Tooling Interference
FBL-230

Unit: mm (")

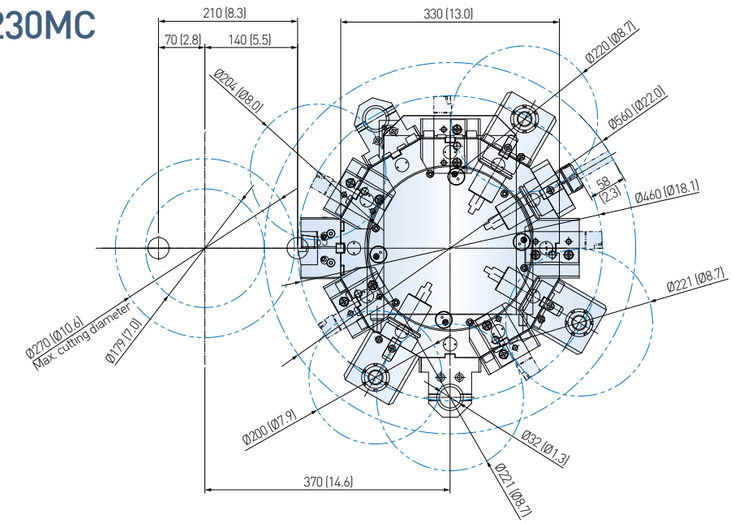
10-station



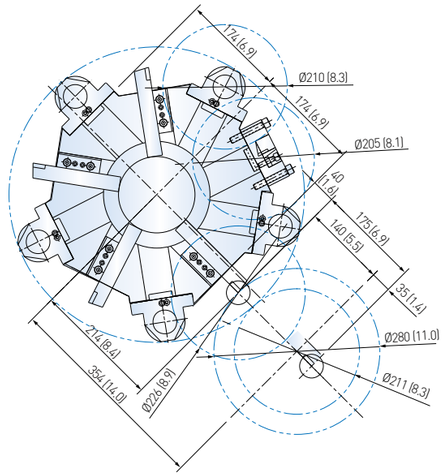
12-station



FBL-230MC

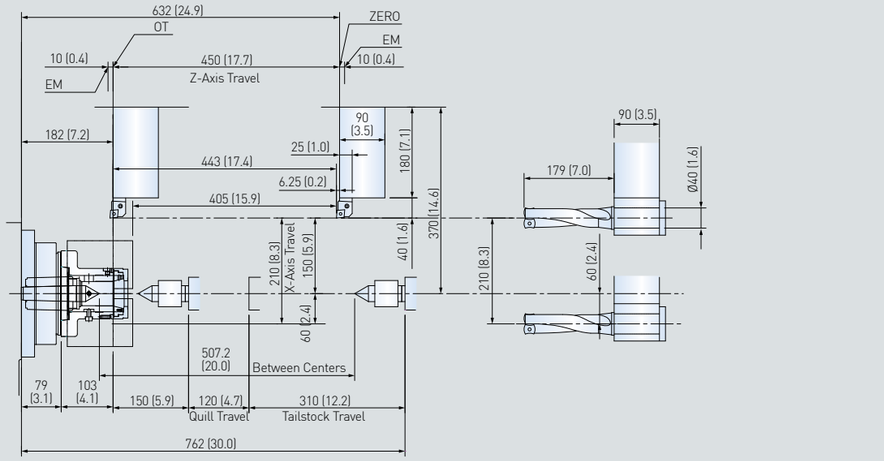


FBL-200L

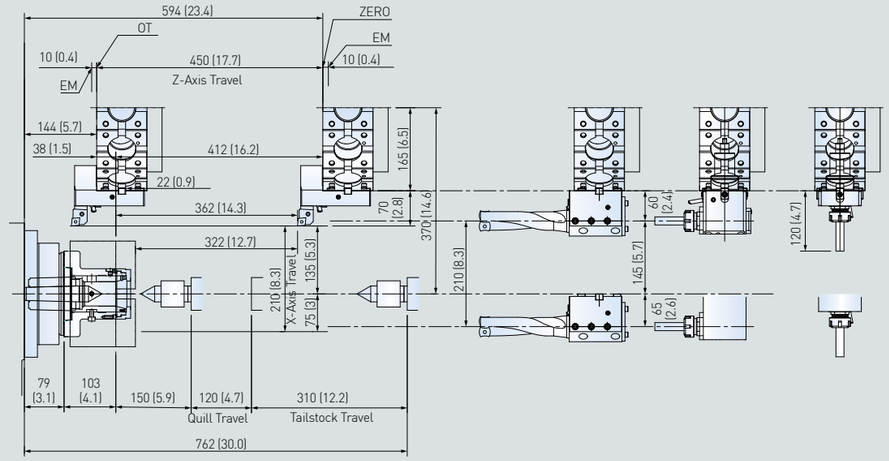


Machining Zone
FBL-230

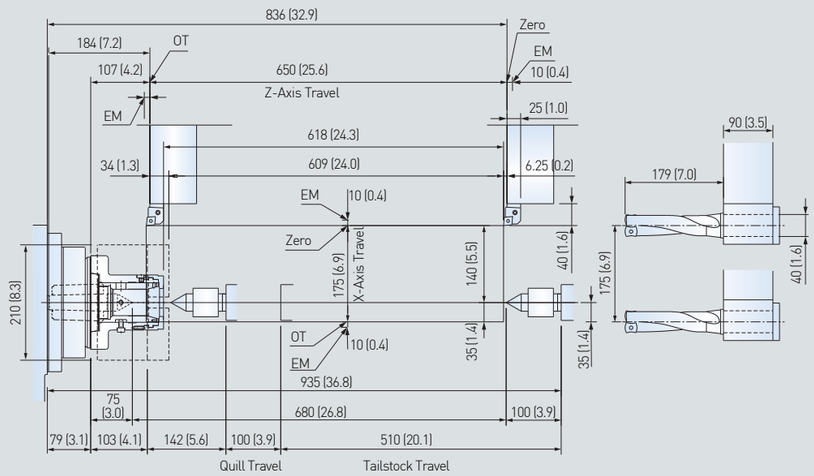
Unit: mm (")



FBL-230MC

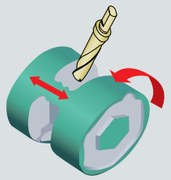


FBL-200L

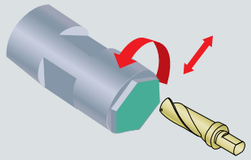


Manual Guide i

Graphic simulation



Polar Coordinate



Cylindrical Interpolation

iMachine Communications System™ (iMCS)

iMCS is a comprehensive remote monitoring software that integrates with IoT functions on Chevalier's CNC machines to perform 24/7 data collection, utilization monitoring, data analysis, alarm history, maintenance and overall equipment effectiveness (OEE), all which help to avoid downtime and increase productivity. Additional PC and software are required.

Control

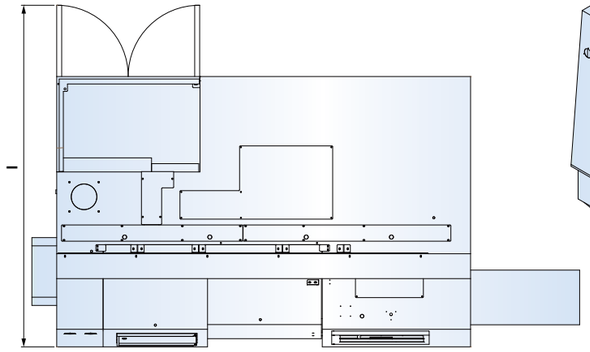
Control specifications

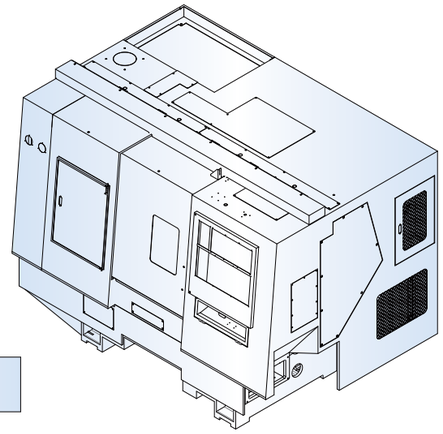
- Fanuc 0i-T series
- Simultaneously controllable axes: 4
- Minimum programmable increment: 0.001 mm (0.0001")
- Program storage length: 1280m (512k)
- Mirror image
- Backlash compensation
- Stored pitch error compensation
- Chuck and tailstock barrier
- CS axis control
- Linear and circular interpolation
- Helical interpolation (optional)
- Rigid tapping
- Rotary axis roll-over function
- Coordinate system settings
- Direct input of coordinate system shift
- Direct drawing dimension programming
- Manual Guide i (optional)
- Constant surface speed control
- Part program and background editing
- Polygon machining
- Operator message history display
- Actual cutting feed rate display
- Display spindle speed and T code at all screens
- Dynamic graphic display (optional)
- Data protection key
- Dry run

Programming Features

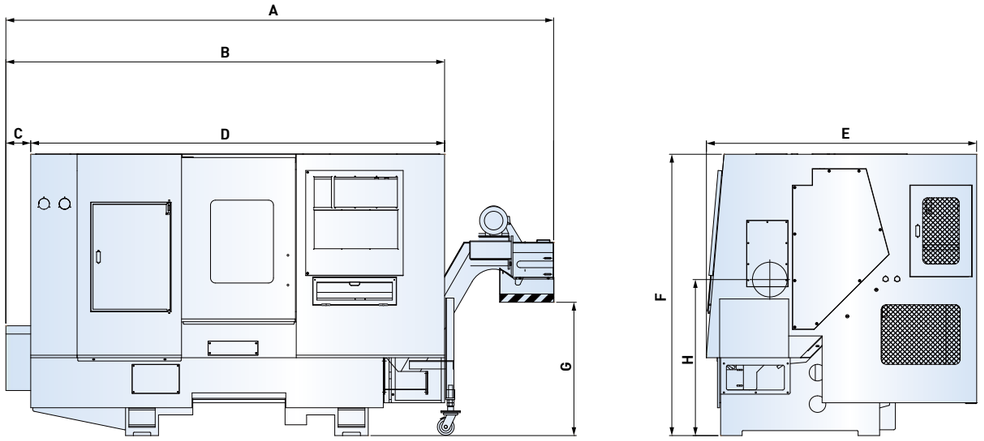
- DNC operation with Cf card
- Program and sequence number search
- Automatic reference position return

Machine Dimensions





Note: Machine shown with optional accessories.



Unit: mm (")

Item	A	B	C	D	E	F	G	H	I
FBL-230	3,310 (103.3)	2,650 (104.3)	150 (5.9)	2,500 (98.4)	1,632 (64.3)	1,700 (66.9)	805 (31.7)	942 (37.1)	2,062 (81.2)
FBL-230MC	3,310 (103.3)	2,650 (104.3)	150 (5.9)	2,500 (98.4)	1,632 (64.3)	1,700 (66.9)	805 (31.7)	942 (37.1)	2,062 (81.2)
FBL-200L	3,664 (144.3)	3,233 (127.3)	180 (7.1)	2,613(102.9)	1,706 (67.2)	1,742 (68.6)	906 (35.7)	907 (35.7)	2,120 (83.5)

Standard and Optional Accessories

●Standard Accessories
△Optional Accessories

Item	FBL-230	FBL-230MC	FBL-200L
8" Hydraulic chuck	●	●	●
10" Hydraulic chuck	△	△	△
Hard jaws (set)	8" x 1	8" x 1	8" x 1
Soft jaws (set)	8" x 1	8" x 1	8" x 1
Hydraulic turret	●	–	●
Servo turret	△	●	△
Boring bar holder	5	4	5
Face holder	2	1	2
Tool sleeve (set)	1	1	1
O.D. tool holder	–	4	–
Coolant system	●	●	●
Moveable coolant tank	●	●	●
Leveling bolts and pads	●	●	●
Grease lubrication system	△	△	△
Centralized lubrication system	●	●	●
Work lamp	●	●	●
Foot pedal for hydraulic chuck	●	●	●
Tool kits (set)	●	●	●
Manuals	●	●	●
Chip conveyor and bucket	●	●	●
MT5 live center	●	●	●
Programmable tailstock	△	△	△
3-color warning light	△	△	△
High pressure coolant pump	●	●	●
Parts catcher	△	△	△
Manual tool setter	△	△	△
Auto tool setter	△	△	△
Oil skimmer	△	△	△
Oil mist collector	△	△	△
Transformer	△	△	△
CE safety accessories	△	△	△
Automatic door	△	△	△
Foot pedal switch for tailstock	△	△	△
Bar feeder interface	△	△	△
Collet chuck	△	△	△
Work blower	△	△	△

Specifications

Item	Description	FBL-230	FBL-230MC	FBL-200L
Capacity	Swing over bed	550 mm (21.7")		470 mm (18.5")
	Swing over cover	330 mm (13.0")		296 mm (11.7")
	Max. cutting diameter	311 mm (12.2")	270 mm (10.6")	280 mm (11.0")
	Max. cutting length	443 mm (17.4")	362 mm (14.3")	610 mm (24.0")
	Distance between centers	507 mm (20.0")		680 mm (26.8")
	Chuck size	8"		
	Max. bar capacity	52mm (2.0"), optional 65 mm (2.5")		
Spindle	Spindle nose	A2-6 ASA		
	Spindle hole diameter	62 mm (2.4")		
	Spindle speed	4,000 rpm		
	Spindle motor	11 / 15 kW		
	Spindle runout	0.003 mm		
Travel	Z-axis	450 mm (17.7")		650 mm (25.6")
	X-axis	210 mm (8.3")		175 mm (6.9")
Feed rates	Turret type	20 m/min (787 ipm)		
	O.D. tool size	20 m/min (787 ipm)		
Turret	Tool system	BMT-55		
	Number of tools	10 / 12 tools	12 tools	10 / 12 tools
	Turning tool size	25 x 25 mm (1.0" x 1.0")		
	Boring tool size	40 mm (1 1/2")	32 mm (1.1/4")	40 mm (1 1/2")
Tailstock	Tailstock travel	310 mm (12.2")		510 mm (20.0")
	Quill travel	120 mm (4.7")		100 mm (3.9")
	Quill diameter	75 mm (3.0")		
	Quill taper hole	MT 5		
	Quill drive	Hydraulic		
	Tailstock positioning	Manual		
Tank capacity	Coolant tank capacity	100 L (22 gals.)		180 L (39 gals.)
Power	Rated power	20 kVA		
Machine dimensions	Width	2,800 mm (110.0")		3,100 mm (122.0")
	Depth	1,700 mm (70.0")		1,600 mm (63.0")
	Height	1,700 mm (70.0")		1,700 mm (70.0")
	Weight	3,500 kg (7,700 lbs.)		4,500 kg (7,700 lbs.)
Control system	Fanuc 0i series* / Siemens 828D			

All content is for reference only and may be subject to change without prior notice or obligation.
*U.S.A. Fanuc 0i series is standard.

Grinding Machines

SMART Grinding Machines

Turning Machines

Milling Machines

CHEVALIER®
Grinding Turning Milling
We shape your ideas.™

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FBL-230 Series_EN_202007/1000P1/@RW

TAF Quality Management QC021 IAF QMS 010 MIRDC ISO 9001 CE